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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,027	06/07/2000	Steven R. Kleiman	103.1037.01	8740

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EXAMINER

NGUYEN, CHAU T

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/590,027

Applicant(s)

KLEIMAN, STEVEN R.

Examiner

Chau Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

1. Claims 1-27 are presented for examination.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1--27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liberty, U.S. Patent No. 6,275,900 and Goldrian et al. (Goldrian), U.S. Patent No. 6,026,448, and further in view of Yamashita et al. (Yamashita), U.S. Patent No. 6,014,695.

4. As to claim 1, Liberty discloses a method, including steps of  
sending data between a client and a server at an address agreed by said client  
and said server (col. 6, lines 14-38: communicating data between a client node and a

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home node (server node), generating at the client node of the plurality of nodes of the computer system data request with a real address of memory);

wherein said steps of sending data are responsive to a request or a response between said client and said server (col. 10, lines 38-58);

However, Liberty does not disclose wherein said steps of sending data are asynchronous with regard to said request or said response. In the same field of endeavor, Goldrian discloses response messages have to be sent from the receiver SAP independently (asynchronously) of the request messages from the sender SAP (col. 9, line 64 – col. 10, line 5). Since Goldrian teaches a method for exchanging messages between a multitude of computer system, whereby the sender's system memory is used as a buffer for the message to be transferred, which is similar to a hybrid non-uniform memory architecture / simple cache only memory architecture (NUMA/S-COMA) for sending data communication to or receiving data communication from another node of the plurality of nodes of a computer system of Liberty, it would have been obvious to one of ordinary skills in the art at the time the invention was made to combine the teachings of Liberty and Goldrian to include sending data are asynchronous with regard to said request or said response. Goldrian provides a method and means for intersystem message passing allowing for a low latency data transfer and avoiding difficult arbitration, routing and time-out procedures.

However, Liberty and Goldrian do not explicitly disclose the address responsive to a size of said data. In the similar field of endeavor, Yamashita discloses transmitting data between client and network server when the client generates a file access request

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to the network server (col. 3, line 33 – col. 4, line 17). Yamashita also discloses the network file system portion 110 of the server includes a buffer management table 140 for managing the buffer 120, accepts the request from the client and allocates the are inside the buffer 120 for storing the data corresponding to the request (col. 6, lines 32-49). In addition, the communication control portion 110 generates a header corresponding to the data inside the buffer on the basis of the communication request, generates a data transfer information table 832 (including logical and physical addresses and size) of the header, and generates further a data transfer information table 321 (including logical and physical addresses and size) of the data and sends the address and the size of data of the header and the address and size of the data to the client (col. 6, line 56 – col. 7, line 2). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Yamashita and Liberty and Goldrian to include the address responsive to a size of data. Yamashita provides a computer network capable of executing a high speed data transfer, a network file server in this computer network system and its data transfer controlling method, which eliminate data copy for generating the packet.

5. As to claim 2, Liberty and Goldrian and Yamashita (Liberty-Goldrian-Yamashita) disclose wherein said request or said response includes at least some control information (Liberty, col. 6, line 54 – col. 7, line 20); and

said steps of sending data are responsive to said control information (Liberty, col. 10, lines 36-58).

6. As to claim 3, Liberty-Goldrian-Yamashita disclose wherein said request or said response includes at least one memory address (Goldrian, Abstract, col. 4, line 1 – col. 5, line 4);

said steps of sending data are responsive to said memory address, wherein said data is read from or written to a memory in response to said memory address (Goldrian, Abstract, and col. 2, lines 26-57).

7. As to claim 4, Liberty-Goldrian-Yamashita disclose a system including  
a client and server (Liberty, Abstract, and Fig. 4);

a NUMA communication link coupled to said client and server (Liberty, Abstract, and Fig. 4);

a request from said client to server or a response from said server to client (Liberty, col. 6, lines 14-38: communicating data between a client node and a home node (server node), generating at the client node of the plurality of nodes of the computer system data request with a real address of memory); and

a data transfer between said client and server (Liberty, col. 10, lines 38-58);

wherein said data transfer has a time that is decoupled from a time of said request or response (Goldrian, col. 9, line 64 – col. 10, line 5); and

wherein said data transfer has a location that is mutually agreed between said client and server (Liberty, col. 6, lines 14-38: communicating data between a client node and a home node (server node), generating at the client node of the plurality of nodes of

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the computer system data request with a real address of memory), said location responsive to a size of said data transfer (Yamashita, col. 3, line 33 – col. 4, line 17, and col. 6, line 32 – col. 7, line 2)

8. As to claim 5, Liberty-Goldrian-Yamashita disclose a byte serial communication link (Liberty, col. 13, lines 47-55).

9. As to claim 6, Liberty-Goldrian-Yamashita disclose wherein either said client or server performs processing of information in said data transfer (Liberty, col. 10, lines 51-58);

said processing is performed in an order convenient to both said client and server (Goldrian, col. 9, line 64 – col. 10, line 5); and

said order is decoupled from an order of said data transfer (Goldrian, col. 9, line 64 – col. 10, line 5).

10. As to claim 7, Liberty-Goldrian-Yamashita disclose wherein said data transfer is responsive to control information in said request or response (Liberty, col. 10, lines 36-58).

11. As to claim 8, Liberty-Goldrian-Yamashita disclose wherein said data transfer is responsive to said request or response (Liberty, col. 10, lines 51-58).

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12. As to claim 9, Liberty-Goldrian-Yamashita disclose wherein said data transfer uses said NUMA communication link (Liberty, col. 10, lines 38-50).

13. As to claim 10, Liberty-Goldrian-Yamashita disclose wherein said mutually agreed location is responsive to control information in said request or response (Liberty, col. 10, lines 38-58).

14. As to claim 11, Liberty-Goldrian-Yamashita disclose wherein said request or response uses said byte serial communication link (Liberty, col. 13, lines 47-55).

15. As to claim 12, Liberty-Goldrian-Yamashita disclose a system including a server, said server having a memory including a client communication region and data transfer region, said data transfer region having buffers matched to different sized data transfers (Liberty, col. 5, line 58 – col. 6, line 38; Yamashita, col. 3, line 33 – col. 4, line 17, and col. 6, line 32 – col. 7, line 2);

a remote DMA communication link coupled to said data transfer region (Goldrian, Abstract, and col. 8, line 40 – col. 9, line 49) ;

said client communication region including information regarding a data transfer into or out of said data transfer region (Goldrian, Abstract, and col. 8, line 40 – col. 9, line 49);

said data transfer being decoupled in time from said client request region (Goldrian, col. 9, line 64 – col. 10, line 5).



16. As to claim 13, Liberty-Goldrian-Yamashita disclose a byte serial communication link coupled to said client communication region (Liberty, col. 13, lines 47-55).

17. As to claim 14, Liberty-Goldrian-Yamashita disclose a processing element is said server coupled to said data transfer region, said processing element responsive to a request from a client or a response to a client (Goldrian, col. 9, line 64 – col. 10, line 5).

18. As to claim 15, Liberty-Goldrian-Yamashita disclose a processing element in said server coupled to said data transfer region, said processing element responsive to control information in said client communication region (Goldrian, col. 9, line 64 – col. 10, line 5).

19. As to claim 16, Liberty-Goldrian-Yamashita disclose a processing element in said server coupled to said data transfer region, said processing element using information if said data transfer region independently of said remote DMA communication link (Goldrian, col. 4, lines 1-26 and col. 9, line 64 – col. 10, line 5).

20. As to claim 17, Liberty-Goldrian-Yamashita disclose a request from a client or a response to said client having information regarding a location within data transfer region (Liberty, col. 10, lines 36-58).

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21. As to claim 18, Liberty-Goldrian-Yamashita disclose wherein said client communication region stores a request from a client or a response to said client (col. 6, lines 14-38: communicating data between a client node and a home node (server node), generating at the client node of the plurality of nodes of the computer system data request with a real address of memory).

22. As to claim 19, Liberty-Goldrian-Yamashita disclose wherein said data transfer region stores a data transfer to or from a client (Goldrian, Abstract, and col. 2, lines 26-57).

23. As to claim 20, Liberty-Goldrian-Yamashita disclose wherein said remote DMA communication link includes a NUMA communication link (Goldrian, col. 4, lines 1-19 and col. 7, lines 15-29).

24. As to claims 21 and 25, Liberty-Goldrian-Yamashita disclose a method including communication file system requests and responses between a client and a file server (Yamashita, Abstract, col. 3, line 33 – col. 4, line 17, and col. 6, line 32 – col. 7, line 2).

25. As to claim 22, Liberty-Goldrian-Yamashita disclose wherein said memory access operation includes a DMA operation (Goldrian, col. 4, lines 1-19 and col. 7, lines 15-29).

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26. As to claim 23, Liberty-Goldrian-Yamashita disclose wherein said memory access operation includes a remote DMA operation (Goldrian, col. 4, lines 1-19 and col. 7, lines 15-29).

27. As to claim 24, Liberty-Goldrian-Yamashita disclose wherein said client includes a database server (Yamashita, Abstract, col. 3, line 33 – col. 4, line 17, and col. 6, line 32 – col. 7, line 2).

28. Claims 26-27 have similar limitations as discussed in claims 1-11 above; therefore, they are rejected under the same rationale.

### ***Response of Arguments***

Applicant's arguments and amendments filed on 10/03/2003 have been fully considered but they are not deemed fully persuasive. Applicant's arguments with respect to claims 1, 4, 12, 21, and 25-26 have been considered but are moot in view of the new ground(s) of rejection as explained above, necessitated by Applicant's substantial amendment (i.e., the address is responsive to information in said requests or responses and to a size of the data) to the claims which significantly affected the scope thereof.

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**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau Nguyen whose telephone number is (703) 305-4639. The examiner can normally be reached at 8:00 am – 5:00 pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (703) 305-9792. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3230.

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Any response to this final action should be mailed to:

**Box AF**

Commissioner of Patents and Trademarks

Washington, D.C. 20131

**Or Faxed to:**

(703) 872-9306, (for **formal communications**; please mark  
"EXPEDITE PROCEDURE").

**Or:**


(703) 746-7240 (for **informal or draft communications**, please label  
"PROPOSED" or "DRAFT").

**Or:**

(703) 872-9306 (for **After Final Communications**).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal  
Drive, Arlington, VA., Sixth Floor (Receptionist).

Chau Nguyen  
Patent Examiner  
Art Unit 2176



**SANJIV SHAH**  
**PRIMARY EXAMINER**